

EXHIBIT 5

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MICHIGAN**

CHAPMAN, et al,

Plaintiffs,

v.

Cause No. 19-cv-12333

GENERAL MOTORS, LLC., a Delaware Corporation

Defendant.

**Supplemental Report of
Edward M. Stockton, M.S.**



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April 2022

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SUPPLEMENTAL REPORT OF EDWARD M. STOCKTON

1. SUPPLEMENTAL DATA INCORPORATION

1. This Supplemental Report is submitted to incorporate updated data provided by General Motors (“GM”). On the evening of March 1, 2022 (the day before I submitted my previous report in this matter), GM advised counsel that there were errors in the data files which they had previously provided, and that new corrected data was incoming. We received non-Bates-stamped versions of this corrected data on March 9, 2022, and finalized Bates-stamped versions on March 15, 2022. Separate from any rebuttal opinions, I evaluated how, if at all, the new data would have altered my findings. The discovery of these errors does not provide any reason to alter the methods or models employed in my prior report. For ease of reference, I refer to GM’s prior customer pay data as the “Original Data” and the replacement data as the “Corrected Data.”

2. The changes from the Original Data to the Corrected Data are considerable. However, the original methods we applied to cleanse and evaluate as presented in the Stockton Report¹ already filtered out the impact of the incorrect or extraneous data. The new data has done little to alter my initial calculations. Below, I identify the steps undertaken to address GM’s data management errors in brief and in more detail in **Tab 1** attached to this report.²

Step 1: Remove records unrelated to vehicles with LML engines.

Step 2: Remove records related to vehicles other than Class Vehicles.

Step 3: Remove records which do not include reference to a part number included in the Customer Care and Aftersales file provided by GM.

Step 4: Remove records from states other than Class States.

¹ Expert Report of Edward M. Stockton, March 2, 2022.

² **Tab 1** consists of pages for each step in the data cleaning process with comparisons of the previous production and current production, along with relevant notes detailing relevant information.

Step 5: Remove records which occur in the Warranty file on the same date.

Step 6: Remove records which occur after December 31, 2020.

Step 7: Remove records with values less than or equal to zero.

Step 8: Remove records with a parts cost (which is the customer pay less the labor rate totals) less than or equal to \$2,000.

Step 9: Remove outliers using the interquartile range method.

Step 10: Using the total customer pay column, remove those records with values less than quartile one or greater than quartile three.

3. The steps described above and presented in more detail in **Tab 1** are necessary to ensure that analyses related to the entire data file rely on appropriate values and are typical of normal data management practices. Steps 1 and 2 remove any records which are not associated with Class Vehicles. Step 3 removes those records which may involve Class Vehicles but are for some repair unrelated to the Defect at issue. Step 4 removes vehicles which are from non-Class States. Step 5 ensures that we do not rely on data for those repairs which occur in both the Corrected Data and the Warranty file. Step 6 removes those repairs which occur outside the Class period. Steps 7 and 8 remove observations which do not have data useful for calculating the cost of the relevant repair; these are likely due to data entry errors. Steps 9 and 10 retain those observations which are typical of the costs facing Failure Group Members.

4. Calculations derived from Corrected Data only differ slightly in terms of the final calculations of typical repair costs. I include a table below which summarizes the change from the Original Data to the Corrected Data, showing that incorporating the Corrected Data has done little to shift the final numbers calculated previously.

Table 1: Original Data and Corrected Data (Middle 50% Summary)

	Original Data	Corrected Data
Count of Records	2,914	2,837
Average Customer Pay	██████████	██████████
Average Labor Cost	██████████	██████████

Executed on April 12, 2022, in Tucson, Arizona


Edward M. Stockton

Selection Criteria for Customer Pay Data Step 0

All records in starting files.

- Remove records for vehicles other than Sierras and Silverados in this step.
This includes multiple records per VIN on the same day, non-class vehicles, and repairs done in non-class states.

	<u>Previous Production</u>	<u>Current Production</u>
File:	GM_CP4_000224548 (Trucks).xlsx	GM_CP4_000224902.xlsx
Date Range:	7/2010 - 12/2021	11/2010 - 2/2022
Record Count:	172,033	19,774
Avg. CP:	██████████	██████████
Avg. Labor:	██████████	██████████

SOURCE: The Fontana Group, Inc.
DATA: Manufacturer Customer Pay Data Files.
F:\GCP4: CPCMPS.XLSX:ST00:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data Step 1

Remove records unrelated to a vehicle with an LML engine.

- Reduce multiple records per VIN on the same day to one record.
- Remove records less than greatest value for cust_pay_subtotal and labor_rate_amt for same job numbers.
- Sum cust_pay_subtotal for differing job numbers (Applies only to Previous Production).
- Sum labor_rate_amt for differing job numbers.
- Remove vehicles without a value of "8" in the eighth position of the VIN.
(Non-LML engines)

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	28,110	12,174
Avg. CP:	██████████	██████████
Avg. Labor:	██████████	██████████

SOURCE: The Fontana Group, Inc.

DATA: Manufacturer Customer Pay Data Files

F:\GCP4: CPCMPS.XLSX:ST01:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data Step 2

Remove records unrelated to relevant Class Vehicles. Class Vehicles are model year 2011 - 2016 Silverado and Sierra pickup trucks.

- Remove records with model years other than 2011 - 2016.
(There were no records outside this range.)

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	28,110	12,174
Avg. CP:		
Avg. Labor:		

Selection Criteria for Customer Pay Data Step 3

- Remove records for which the field "part_item_id" did not contain a Part Number included in the Customer Care and Aftersales part sales files provided by GM.

	<u>Previous Production</u>	<u>Current Production</u>
CCA File:	GM_CP4_000224543 - CCA Sales Data UPDATED.xlsx	GM_CP4_000224899.xlsx
Record Count:	19,858	11,346
Avg. CP:		
Avg. Labor:		

SOURCE: The Fontana Group, Inc.
DATA: Manufacturer Customer Pay Data Files.
Customer Care and Aftersales Part Sales Files.
F:\GCP4: CPCMPS.XLSX:ST03:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data Step 4

Remove records for which the dealer performing the repair is not located in a Class State.

- Class states are as follows:

Alabama	Kansas	Nebraska	Pennsylvania
Alaska	Louisiana	Nevada	Rhode Island
Arkansas	Maine	New Hampshire	South Carolina
California	Maryland	New Jersey	South Dakota
Colorado	Massachusetts	New Mexico	Texas
Delaware	Michigan	New York	Utah
Florida	Minnesota	North Carolina	Vermont
Hawaii	Mississippi	North Dakota	Washington
Illinois	Missouri	Oklahoma	West Virginia
Indiana	Montana	Oregon	Wyoming
Iowa			

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	16,974	9,576
Avg. CP:	[REDACTED]	[REDACTED]
Avg. Labor:	[REDACTED]	[REDACTED]

Selection Criteria for Customer Pay Data Step 5

Remove records for vehicles which already appear in the Warranty file on the same date.

- Records are considered to overlap if the same VIN and date of repair appear in both Customer Pay and Warranty data files.

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	9,804	9,344
Avg. CP:		
Avg. Labor:		

SOURCE: The Fontana Group, Inc.
DATA: Manufacturer Customer Pay Data Files,
Customer Care and Aftersales Part Sales Files,
Manufacturer Warranty Data Files.
F:\GCP4: CPCMPS.XLSX:ST05:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data Step 6

- Remove records with a date later than 12/31/2020 in the field "opened_date".

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	7,993	7,421
Avg. CP:		
Avg. Labor:		

SOURCE: The Fontana Group, Inc.
DATA: Manufacturer Customer Pay Data Files.
Customer Care and Aftersales Part Sales Files.
Manufacturer Warranty Data Files.
F:\GCP4: CPCMP5.XLSX:ST06:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data Step 7

Remove records with values less than or equal to \$0 in the fields "cust_pay_subtotal" or "labor_rate_amt".

- Blank values are considered to be 0.

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	7,517	7,039
Avg. CP:		
Avg. Labor:		

SOURCE: The Fontana Group, Inc.
DATA: Manufacturer Customer Pay Data Files,
Customer Care and Aftersales Part Sales Files,
Manufacturer Warranty Data Files.
FAGCP4: CPCMP5.XLSX:ST07:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data

Step 8

Remove records with a parts cost of less than \$2,000.

- Parts cost is calculated as $\text{cust_pay_subtotal} - \text{labor_rate_amt}$.
- Cust_pay_subtotal and labor_rate_amt values are inflation adjusted to 2021 dollars.
- Remove records where inflation adjusted $\text{cust_pay_subtotal} - \text{labor_rate_amt} < \$2,000$.

	<u>Previous Production</u>	<u>Current Production</u>
Record Count:	6,068	5,895
Avg. CP:	[REDACTED]	[REDACTED]
Avg. Labor:	[REDACTED]	[REDACTED]

SOURCE: The Fontana Group, Inc.
 DATA: Manufacturer Customer Pay Data Files.
 Customer Care and Aftersales Part Sales Files.
 Manufacturer Warranty Data Files.
 Bureau of Economic Analysis Internet Site, 1/27/2022.
 F:\GCP4: CPCMP5.XLSX:ST08:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data

Step 9

Perform Interquartile Range (IQR) Test using "cust_pay_subtotal" to identify potential outliers.

- Apply Quartile.exc Excel function to inflation adjusted cust_pay_subtotal to determine Quartile 1 (Q1) and Quartile 3 (Q3).
- Remove records that are less than $(Q1 - (Q3 - Q1) * 1.5)$ or greater than $(Q3 + (Q3 - Q1) * 1.5)$.

Previous Production

IQR Calculation

Select Customer Pay Records
2021 Dollars

	<u>Total Cost</u>
Quartile 1	
Quartile 3	
IQR*1.5	

Range Min	
Range Max	

Previous Production

Record Count: 5,828

Avg. CP:	
Avg. Labor:	

In Previous, Not in Current

Record Count: 167

Avg. CP:	
Avg. Labor:	

In Previous and in Current

Record Count: 5,661

Avg. CP:	
Avg. Labor:	

Current Production

IQR Calculation

Select Customer Pay Records
2021 Dollars

	<u>Total Cost</u>
Quartile 1	
Quartile 3	
IQR*1.5	

Range Min	
Range Max	

Current Production

5,675

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In Current, Not in Previous

Record Count: 17

Avg. CP:	
Avg. Labor:	

In Previous and in Current

Record Count: 5,658

Avg. CP:	
Avg. Labor:	

Note: Records are considered to be in both productions if a VIN appears in both productions for the same repair date.

SOURCE: The Fontana Group, Inc.

DATA: Manufacturer Customer Pay Data Files.

Customer Care and Aftersales Part Sales Files.

Manufacturer Warranty Data Files.

Bureau of Economic Analysis Internet Site, 1/27/2022.

F:\GCP4: CPCMP5.XLSX:ST09:89:TNILII:RTKHIII:69

Selection Criteria for Customer Pay Data

Step 10

Based on the "cust_pay_subtotal" field, remove the outer 50% of records from Step 9. The remaining records are included in analysis.

- Apply Quartile.exc Excel function to inflation adjusted cust_pay_subtotal for remaining records to determine Quartile 1 (Q1) and Quartile 3 (Q3).
- Remove records that are less than Q1 or greater than Q3.

Previous Production

Record Count: 2,914
 Avg. CP: [REDACTED]
 Avg. Labor: [REDACTED]

Current Production

2,837
[REDACTED]

In Previous, Not in Current

Record Count: 90
 Avg. CP: [REDACTED]
 Avg. Labor: [REDACTED]

In Current, Not in Previous

Record Count: 13
 Avg. CP: [REDACTED]
 Avg. Labor: [REDACTED]

In Previous and in Current

Record Count: 2,824
 Avg. CP: [REDACTED]
 Avg. Labor: [REDACTED]

In Previous and in Current

Record Count: 2,824
 Avg. CP: [REDACTED]
 Avg. Labor: [REDACTED]

Note: Records are considered to be in both productions if a VIN appears in both productions for the same repair date.